

The Law and the Trial

The Tennessee Anti-Evolution Law

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IF at any given moment in a discussion on the Tennessee anti-Evolution law, we hope to orientate ourselves, it is altogether necessary to begin by stating what the law is. One way of discovering the meaning of this law is found in quoting it:

An act prohibiting the teaching of the evolution theory in all the universities, normals, and other public schools of Tennessee, which are supported in whole or in part by the public school funds of the State, and to provide penalties for the violations thereof.

Section 1. Be it enacted by the General Assembly of the State of Tennessee, that it shall be unlawful for any teacher in any of the universities, normals, or other public schools of the State which are supported in whole or in part by the public school funds of the State, to teach any theory that denies the story of the Divine creation of man as taught in the Bible, and to teach instead that man has descended from a lower order of animals.

Section 2. Be it further enacted, that any teacher found guilty of the violation of this act shall be guilty of a misdemeanor and upon conviction shall be fined not less than \$100 and not more than \$500 for each offense.

Section 3. Be it further enacted, that this act take effect from and after its passage, the public welfare requiring it.

What was the intention of the legislators who enacted this law? That they apprehended serious danger from the teaching of "the evolution theory" is plain. Probably what they mean to do is best expressed in Mr. Bryan's telegram of July 14 to the *New York Times*: "The people of Tennessee are simply trying to keep atheism and agnosticism out of the public schools." If such was the intention of the legislators, it will be accorded the support of all Americans, irrespective of creed. It is true that an agency of the civil State, in this case, the public schools, may not teach religion, but it is also true that they may not teach a doctrine which attacks or tends to destroy religion. Nor may they propagate doctrines plainly subversive of private or public morality. Polygamy and the varied anti-social

doctrines generally comprehended under the head of "Bolshevism" are instances in point.

But, unfortunately, there is a marked discrepancy between what the legislators, as interpreted by Mr. Bryan with, I think, substantial correctness, intended to do, and what they actually did. Intending to exclude atheism and agnosticism from the public schools, the law which they enacted authorizes the courts of the State to establish a school of Biblical Interpretation, and to punish by fine all public-school teachers who refuse to teach according to its decisions. No doubt, there is a "story of the Divine creation of man . . . taught in the Bible," but equally without doubt that story is capable of various interpretations. Who shall decide what interpretation shall avail to relieve from punishment by the State, or rule as to what may be tolerated, or, finally, as to what subjects to fine? Evidently, the courts of the State. If my inference is correct, and I do not see in what respect it is wrong, for the first time in our history, the right to set itself up as an interpreter of Holy Scripture and to force its interpretations under penalty, has been assumed by an American State. I submit that this assumption is prohibited both by the Constitution of the State of Tennessee, which forbids the imposition of religious tests as a qualification for public office, and by the Fourteenth Amendment to the Federal Constitution.

Judge Raulston's ruling in the State court that the law is constitutional because the State has the right and duty of protecting the child, seems to me to beg the question. The State has that right, undoubtedly, but not the right to protect the child by unconstitutional means, and it is precisely the means specified by the law that are in question. If the State may protect the child in the public school by prescribing the teaching of one doctrine said by the legislature to be found in the Bible, it may prescribe a second and a third, and forbid a fourth and a fifth as *contrary* to the Bible. The question is not the protection of the child, for on that all agree. It is on the means which the State may lawfully invoke to protect him.

Now it is no function of the civil power, according to Catholic theologians and to accepted commentators on American constitutional law, to teach religion, or to rule on debated points in religion unless the State is clearly in

danger from some doctrine proposed under the guise of religion or morality. Hence the Federal Constitution forbade Congress to impose religious tests as a qualification for public office, and the same prohibition has been in force in the respective States (with a few exceptions) for many years, and is now found in all State Constitutions. But, as it seems to me, the Tennessee law imposes a religious test as a qualification for office, since it, in effect, debars from the staff of any public school the citizen who does not agree not to "teach any theory that denies the story of the Divine creation of man as taught in the Bible." It is quite true, of course, that he can claim no constitutional right to teach the falsity of any Biblical narrative in the public school. But it is his right to be protected against religious tests; and the Tennessee law practically forces, as a qualification for office, the acceptance of a Divine creation as interpreted by the legislature. Should this law be sustained it is difficult to see what vitality remains in the Federal and State prohibition of religious tests, and, by consequence, what protection is to be found in the constitutional guarantees of religious liberty. When the State may bar a citizen from public office because he is unable to abide by and teach the State's interpretation of Genesis, it may bar him because he holds other views at variance with the State's concept of what the Bible teaches or forbids. Thus we should soon see the day in which citizens would be deprived even of natural rights through religious tests imposed by the legislature. When the secular State presumes to dogmatize in religion, we face chaos.

In striving to force its interpretation of the Bible upon the teachers in the public schools, the legislature of Tennessee has, in my judgment, begun a movement which, if not checked, will destroy religious liberty in the United States. Up to the present Judge Raulston's rulings indicate that he has no doubt of the law's constitutionality, but whatever the decision of the jury, it is certain that the case will reach the Federal courts. Resting on the assumption that anyone's guess is as good as my own, I suggest that Mr. Darrow will stress the plea of religious liberty in the Federal courts and that he will be sustained by them in his contention.

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Minority Rights in Tennessee

One cannot help feeling a certain sympathy with Mr. Bryan's efforts to prevent the teaching of atheism to children in the grammar and high schools, under the guise of "science." At the same time, it must be admitted that Mr. Bryan was leading the fight along lines that can only strengthen the position of his antagonists.

Particularly open to criticism is his statement that a majority of the people have the undisputed right to decide what shall be taught or not taught in the schools. This is only a restatement of the tyrannical principle that a minority has no rights which the majority is bound to respect. It would justify the Nebraska law declared unconstitutional by the Supreme Court, the Oregon school law rejected by a Federal District Court and now pending before the Supreme Court, and any regulation affecting the schools which a majority might happen to enact. Mr. Bryan probably did not reflect that if there is no limit upon the rights of the majority, then the majority could require every child in the public and private schools to take a course in atheism and immorality.

By profession Mr. Bryan was a member of the Democratic party. But like many other Democrats and the party itself he departed far from the principles of Thomas Jefferson who wrote that there exists in no majority, however great, the right to destroy the rights of the minority. The power may reside in a majority, but political power used to destroy a right is not government. It is tyranny.

Meanwhile timid souls who mistake the squall in Tennessee for a cyclone may take comfort by glancing at their newest radio set. It may remind them that Ampère was a devout Catholic, Galvani a member of the Third Order of St. Francis, Ohm a teacher in a Jesuit college, and that Volta used to hear Mass every morning, visit the Blessed Sacrament every night, and end the day by reciting the Rosary. It is rather a pity that the radio cannot be considered biologically; otherwise it might recall Johann Muller, Pasteur, and Gregor Mendel, the Augustinian Abbot. No, there is no immediate danger of a conflict, provided science and religion each be genuine.

(Editorial in AMERICA)

Mr. Bryan Counts Noses

As has been observed in these pages, Mr. Bryan seems obsessed with the idea that the American Government is or ought to be a Government in which every issue is decided by counting noses. True, this obsession is not confined to Mr. Bryan, but he was certainly an outstanding example. "The evolutionists, if they were in the majority in Tennessee," he recently remarked, "could elect a legislature on this issue and repeal the law; but knowing they are in a minority, they have not suggested any such action." "This," comments the *New York Sun*, "is all Mr. Bryan sees in the question," and were a legislature to ban some particular religious denomination, "Mr. Bryan's only comment, presumably, would be blandly to advise the sect barred to go get a majority."

In a communication to the *New York Times*, Mr. Bryan proposed another aspect of his now familiar doctrine that the schools should, of right, be completely controlled by the majority, and for it claimed the sanction of the Supreme Court. "The people of Tennessee," he wrote, "are striving to keep atheism and agnosticism out of the schools, and in this they are sustained by the decision of the Supreme Court in the Oregon case." This extraordinary contention allows the suspicion that Mr. Bryan had not studied the decision to which he appealed. For in that case the Supreme Court unanimously denied the right of a majority to impose its will on a minority.

The point at issue in this case was the right of the State of Oregon to compel parents to send their children to the public school. That supposed right had been asserted by a majority in Oregon. It was argued by opponents of the law that the child was not the creature of the State to be trained according to the dictate of a majority, and that to the parent, not to the State, belonged the right to select the school for him. These contentions, assailed by a majority in Oregon, were affirmed without a dissenting vote by the Supreme Court. "The fundamental theory of liberty upon which all Governments in this Union repose," said the Court, "excludes any general power of the State to standardize its children by forcing them to receive instruction from public teachers only." In other words, the majority in Oregon which asserted this power

for the State, was wrong when it made the assertion. In the Oregon case, the Court adopted "the doctrine of *Meyer v. Nebraska*" affirmed on June 4, 1923. In that ruling the Court held in even stronger terms that there are rights which no majority may destroy. The issue then before the Court was not precisely the right of the parent to control the education of the child, although this right was also affirmed in the Court's decision, but the right of a citizen to teach a foreign language in a private school, and the right of parents to employ him to instruct their children. During the argument offered by Mr. Arthur Mullen of Omaha, Mr. Justice McReynolds interrupted to ask Mr. Mullen's view of the right of the State "to require all children to attend the public school. You will admit that, will you not?" The brief examination which then ensued prepared the way for the decision in the Oregon case. "I do not admit that," Mr. Mullen answered.

Mr. Justice McReynolds: You do not admit that?

Mr. Mullen: I do not admit that. I deny that a State can, by a *majority of the legislature*, require me to send my child to a public school. . . . [No] legislative majority can be its mere fiat take my children and require me to send them to a public school, and *have the course of study absolutely controlled by the State*. I deny that any such power exists under a constitutional government.

Mr. Mullen's views, accepted by the Court, were incorporated, in substance, in the Court's decision. Plainly they are directly opposed to the view of Mr. Bryan. Plainly too, there is no support in either the Nebraska or the Oregon decision for Mr. Bryan's doctrine. In each case the Court rejected a so called right assumed by a majority.

Politically, Mr. Bryan was a Democrat. The founder of that party, Thomas Jefferson, is not the sole fountainhead of political wisdom, but his authority is respectable, and he once wrote, in phrases adopted by the State of Kentucky for her Bill of Rights, that absolute power over freemen exists no where in a republic, not even in the largest majority. Jefferson disagrees with his political son in anathematizing government by counting noses.

(Editorial in AMERICA, July 25, 1925)

That Tennessee Law

It is somewhat amusing to note the two occasions which always stir our American editors to a hot defense of personal liberty. The first is when there is question of forbidding the sale of improper publications, and the second, when an effort is made to suppress an immoral play. Hence whenever your editor begins to mourn over the downfall of freedom, it is well to look for an Ethiopian concealed somewhere about the premises. There are exceptions, but they shine by contrast.

Our editors are running true to form in their well-nigh unanimous denunciation of the famous Tennessee law. It might be thought that the direct effect of this statute was to hale to the stake every man in the State who had ever suffered himself to be addressed as "professor," and by this drastic procedure to put an end to all scientific study and investigation. Writing to the *New York World*, Dr. John A. Ryan, of the Catholic University, points out that the substance of the law has been misunderstood. It does not command anyone to do anything, and its one prohibition is directed against "theories which deny the story of the Divine creation of man as taught in the Bible."

Dr. Ryan is justified in asking the editor if he is in earnest in assailing this prohibition as "improper." For if it is improper to teach "fundamentalism" in the public schools, as it assuredly is, "it is equally improper to teach anti-fundamentalism, or any other religious doctrine, or any doctrine about religion, or any doctrine in opposition to religion." We have been led to believe that schools supported by the State must at least attempt to be neutral in these matters. "Those who defend the right to do what the law forbids, are in effect repudiating the principle that the public schools should be neutral on the subject of religion." But to teach what the Tennessee law forbids is an odd sort of neutrality. If it is "sectarian" to affirm the Divine creation of man, it is not easy to understand why the denial of this should be "neutral."

It is also amusing to note that the gentleman now under indictment for violation of the law is not, as the first reports seemed to indicate, a hoary sage who had passed a long life in passionate devotion to his mistress,

Science. He is twenty-four years of age and his chief duties at the high school to which he was attached were those usually assigned to the director of athletic contests.

(*Editorial in AMERICA, June 13, 1925*)

"A Plague on Both Your Houses"

The current outbreak of evolutionary controversy serves to bring to mind the ever-present danger that the attitude of Catholics in the matter be misunderstood. The New York *Evening World* on June 18 very well pointed out that two kinds of bigots have been developed by the Scopes case: "The bigot who insists that evolution shall not be explained even as a theory," and the "fanatic who insists that scholastic freedom is curtailed unless public-school teachers are permitted to teach the theory as a fact that must be accepted." To these types may be added two other sets of extremists with whom Catholics have no sympathy: the enthusiasts who insist on looking on the Scriptures as a textbook on science, and the scientists who insist on pushing beyond the confines of science into the realm of metaphysics and philosophy. The discouraging part of it all is that up to this only the extremists have had a hearing. And both sides seem to agree only on the very thing on which Catholics disagree with them both: namely, that you cannot hold any form of evolution and still retain your belief in Christianity.

The safe rule is the one held both by Catholics and the greatest scientists, the rule of common sense: "stick to proved facts, and you cannot go wrong." With the popular scientists of the newspapers we part company when they leave the path of fact and push mere theory down our throats as something which must be swallowed as fact. They will pardon us if, along with the upper reaches of the scientific world, we decline to accept as a proved that the evolution of the body of man from lower animals. We stand aside from those who like W. J. Bryan demand that we give unconditional submission to their particular interpretation of the first chapters of Genesis. They will pardon us if we decline to be identified with those who are looked on as enemies of Science. For our stand is perfectly clear: when Evolution, or any part of Evolution, becomes a proved fact, we will accept

it, with no fear that it will contradict any part of Revealed Truth. Until then, we will persist in looking on it as an interesting theory, to which one can, as one sees right, give provisional adherence. But until the affirmative or the negative has proved its side, we demand our freedom.

(Editorial in AMERICA, July 4, 1925)

The Trial at Dayton

It is a little hard to see how either side of the controversy could hope that the Dayton "monkey-trial" would settle anything. First of all, the issues were too confused long before the trial began. Mr. Bryan incautiously announced that Christianity itself was on trial. Others professed to see the Freedom of Science in the prisoner's box along with Mr. Scopes. Still others thought constitutional government was the issue. And it is true that religion, science and politics had suddenly found themselves all three bound up together in one sensational case. To make matters worse, the case, according to a recent vicious practice, was "tried in the papers" long before the battery of lawyers arrived in Dayton to try Mr. Scopes. The result was that with at least three major issues in the minds of all, the lines were nowhere clearly drawn. Many opponents of evolution reject the Tennessee anti-evolution law. Many evolutionists are just as intolerant and bigoted on their side as the most rabid Fundamentalist on his side. Many good Christians hold some part of Evolution to be proved, and yet only too many of the scientists look on Evolution as the best stick yet found with which to beat religion.

In all this what is the honest citizen to do who believes in a divinely revealed religion and yet at the same time holds tenaciously to the utmost freedom in scientific research? One thing might be recommended to him, and that is to stick to the chief issue of all, namely, is or is not Evolution a proved fact? As a sort of test he might begin by proposing to the evolutionists these three questions: 1. Is it shown by scientific evidence that life evolved or can evolve out of inert matter? 2. Is it shown by scientific evidence that animal sensation evolved or can evolve out of lower non-sensitive life? 3. Is it shown by scientific evidence that a spiritual intelligence evolved or can evolve out of lower animal life? Until those three

vast chasms are bridged, we are still justified in holding Evolution not to be a proved fact.

(*Editorial in AMERICA, July 18, 1925*)

The Middle Road to Dayton

The old idea that there are only two sides to every question was never more completely exploded than in the Dayton Trial. In this case, as in several recent cases where the same forces clashed, the interested bystander has a perfect right to exclaim: "You're both wrong!" It is undoubtedly for this reason that Catholics, except for one or two individuals in their private capacity, have not interfered in the dispute. There is too much to disagree with on each side for anyone who loves Truth for its own sake to take sides with either, and this is complicated by the fact that each in its way is also fighting for a principle that all good Christian citizens cherish. But surely no Catholic will al^ly himself irrevocably either with a group that is only too patently irreligious, or yet with those who form part of a long-existing movement to establish a Fundamentalist religion in this country.

There is nothing new about the situation. The Church has always been there when it found itself face to face with two sets of extremists. The only drawback in the matter is that unthinking people get the idea that those who adopt such a neutral attitude have no definite policy of their own. But it would be unfair to make that charge against Catholics in the present instance, and this number of *AMERICA* may be taken as a good proof of that statement. Catholics are for Religion, for Science and for Freedom all at once. If anyone thinks he can defend those three causes by allying himself with either of the two sides in the Scopes case, let him try it. The middle road, it is true, is not always an easy course to hold, especially in the face of our national tendency to take sides in a fight, but it is certain that Religion will be defended, Science advanced, and Freedom safeguarded, only by those who persist in calmly scanning all proofs put before them and in keeping passion out of it. It is probable that the followers of Science will rue the day when they allowed its name to be put forward as one of the protagonists in this case.

(*Editorial in AMERICA, July 25, 1925*).

II—The Evolution Theory

Hypothesis, Theory or Fact?

WILFRID PARSONS, S.J.

THE one aspect of the evolution case that is in danger of being overlooked in the clash of passions is the calm scientific question: Is Evolution the Truth? Is it a hypothesis, a theory or a fact? The *New York Times*, on July 12, in an editorial used the following words:

Such an opportunity for popularizing, in the best sense, scientific truths can rarely have presented itself. Let it be improved by men ready to give reasons for the faith that is in them. They can explain in a way intelligible to the ordinary mind the process of engraving the theory of Evolution upon all modern thought. They can show how it is today the presupposition of inquiring minds in all departments of knowledge. It is taken for granted in every laboratory. It is a part of the baggage which every explorer carries with him into unknown lands. It is the indispensable tool of the modern investigator and the modern philosopher alike. It is the great working hypothesis of science everywhere. Educated men think unconsciously in terms of Evolution. The idea of it and the applications of it are woven into the intellectual life of the whole world today.

That the idea of Evolution has entered largely into modern thought is so true that men are beginning seriously to ask themselves whether any educational system that ignores it can be recognized by the State as of any value. However, if the passage quoted above be analyzed, it will be observed that the word "Evolution" is used in more than one meaning in a very short space. Evolution as a general word meaning "progress" is evidently confused with the organic evolution of species, which is the point at issue.

Analyzed further, it will be seen that the passage presents Evolution (of species apparently) first as a "scientific truth," then as a "faith," then as a "theory," then as a "presupposition," as "taken for granted," as a "tool," and finally as a "working hypothesis." In fact, the passage is a nearly perfect picture of the inside of the mind of the ordinary person when he thinks of Evolution, and for that reason it is chosen as a text for this

article. It is a fair question if the writer of that editorial had in his own mind any clear idea whether he himself holds Evolution as something true, a proved fact, or as merely probable, but not yet proved. It remains, of course, true that he may have used the words without any very exact sense of their precise import, and in that case it is still impossible to say what he really meant.

Now what is the difference between hypothesis, theory and fact, and to which of these three classes does Evolution belong? There are at least two sets of men who more than any others must have this distinction clearly in their minds, and they are lawyers and scientists. Every lawyer knows that the prosecuting attorney will not convict his man on a mere theory of who committed the murder, still less on the hypothesis on which his detectives are working. He must produce facts; and the laws of evidence and a judge are there to see that he does produce them. No scientist reading a paper before his peers will dare to label as a fact what is only a theory of his, still less the hypothesis on which he is conducting his investigations. The unfortunate thing is that lately we have had both lawyers and scientists coming before the untutored public and attempting to do this very thing.

We are all being bombarded with pseudo-scientific propaganda these days, and a very good armor with which to meet the arrows of argument is a little knowledge of what I might call the anatomy and the physiology of thought. Take a chemist who is starting out on the qualitative analysis of a certain unknown substance put before him. He wants to know just what is in the tube he holds in his hands. At present he does not know; he is said to be in a state of ignorance. But he has his suspicions. It may be X, a very rare element. Very well, he draws off some of it and he applies to that some other substance which, *if it is X*, will cause it to give off a very easily recognized reaction. He is working on the *hypothesis* that it is X. He acts as if it were X, to see if it really is X. The hypothesis that it is X, is not a fact about this unknown substance, but a means to find out the facts about it, a "tool," a "presupposition." If the expected reaction occurs, and certain other facts are checked up in conformity with this reaction, the chemist can come be-

fore us and say with certainty that this really is X. He has passed from ignorance, through probability, to certitude.

But suppose, after applying every known test to this unknown substance, he is still unable to say with certainty just what it is. He certainly has not yet got the truth about it. He may be still in entire ignorance about it. But a certain number of phenomena about it now lead him to think it may turn out to be Y. He puts these all together and is able to present a very creditable *theory* that it is Y. Many things "go to show" that it is Y. Nothing yet "proves" that it is Y. He has not yet crossed the bridge to the truth of the matter. That bridge, when and if he comes to it, will be the evidence. When the evidence leads him to the Truth, then he will be certain. But he cannot hold as certain what is only a theory.

Now so far this chemist has been a very good scientist, because he has observed all the ordinary laws of his own mind. But now he suffers a temptation to stray from the straight and narrow path of scientific method. Most probably he does not even know he is being tempted. But from a variety of personal, religious, social and utilitarian motives he becomes all bound up in a passionate effort to prove to the world that his theory is the truth, that the substance is really Y. Right away he is exposed to still another mental state, that of positive fallacy and error, for his feelings have now entered into it, and feelings are the chief source of error. From then on his mind will play him the most fantastic tricks, and he will jump from fact to probability and back again, as he thinks, and end by putting before us as facts things which are not facts at all, and all because he has forgotten the primary law of evidence, that no conclusion is stronger than the weakest link in the chain of arguments that lead to the conclusion.

Now, what about Evolution? Once more, is it a mere hypothesis, or a theory, or a fact? Once it was a mere hypothesis, a speculation, but a very promising means to use to lead the world to new discoveries in biology especially. Using Evolution as a clue, very many facts in palaeontology, geology and zoology were found that

seemed to point that there was a gradual production of things and beings on the earth in a gradually ascending scale up to man. Using Evolution as a hypothesis, scientists came to erect a very complete theory of Evolution. Has it gone beyond the state of theory? Is there a bridge of evidence from fact to fact—and not from fact to probability merely—that warrants us in saying, for man especially, that organic Evolution is a proved fact? Read the arguments. Almost from the very nature of the case it is not a proved fact—there are not enough phenomena in the case of man, for instance, to warrant any first-class scientist in asserting the Evolution of man as a proved fact. Even Henry Fairfield Osborn, one of the most indefatigable evolutionary propagandists, in his article in the *New York Times* Sunday feature section, July 12, admits he can show no direct non-human ancestor from which man evolved. All he has is analogy, inference, probability. From a chain like that no bridge of evidence was ever erected. When we are shown life emerging from inert matter, sensation growing out of plant life, intellectual life evolving out of sensation, when these three chasms are bridged; Evolution will be a proved fact. That quarrel that Catholics—and not Catholics alone but all lovers of truth—have with much popular writing on Evolution, is not that it is science, but that it is bad science. It presents as fact what is only speculation.

And as for the conclusions that are drawn from the theory of Evolution, as men draw conclusions from facts, words cannot describe the confusion that exists. If any non-believers fondly hope that Evolution will prove the non-existence of a transcendent and creating God they are doomed to a disappointment. If ever Evolution becomes a proved fact, it will be probably the most shining proof yet found for the existence of a supreme intelligent Being. Catholics at least have no kind of fear of the most untrammeled progress of Science that remains Science and does not wander off its predestined path into the field of philosophy and theology. What they have to fear is the unfaithful science that violates its own laws and presents theories as truths, probabilities as proved facts, guesses as certainties.

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Science and the Bible

EDWIN D. SANDERS, S. J.

WHAT is the true attitude of the Bible towards Science? In one sense it would be perfectly correct to say that the Bible assumes *no* attitude towards Science. They are in fields apart. Science is dealing with the phenomena of the physical universe; it investigates, it makes experiments, it tabulates results and then by the method of induction establishes its laws. And as long as it sticks to facts and does not by progressive assertion transform hypothesis into facts, it will never clash with the Bible. The Holy Scriptures on the other hand are neither hostile nor friendly to the findings of Science, for the simple reason that they are not a scientific treatise but a collection of books written for a purely religious purpose. Mr. Darrow made one accurate statement about the Bible when he said that it is "not a textbook nor a text on chemistry . . . not a book of geology . . . not a book on biology." The main purpose of the Bible is to tell the history of God's revelation to man, and, whatever may be said of Science, the Bible at least never wanders afield. From Genesis to the Apocalypse it is unswervingly faithful to its purpose. We read the Bible not to become scientists but to become saints.

Yet the Bible cannot and does not ignore the existence of the physical world. Though religious in purpose, though teaching us so much about God and the spiritual world, it is at the same time largely a story of men and things. It tells of a world of men who lived and fought and prayed and sinned and died. And these men used the fruits and animals of the earth for their food; they walked the green earth and sailed the sea; they saw the glories of the sunset and the wonders of the starry night.

And precisely because the Bible is a human book, as well as Divine, these physical phenomena are often described in its pages. But description, especially popular description, is not scientific exposition. The human authors of the Bible did not have to know the discoveries

of modern Science to describe what their eyes saw and their ears heard. And this is all they have done in the Bible. These descriptions are therefore neither scientific, nor are they unscientific; it were better to speak of them as non-scientific. By this we mean that they simply do not attend to the scientific aspect of the facts which are described. And as popular descriptions of what the eye saw and the ear heard, they are perfectly true. Hence how unfair it is to accuse the sacred writer of error, and to poke all manner of fun at him merely because he does not describe the phenomena of the physical world as a modern textbook would do!

But such an explanation does not satisfy those modern scientists who were clamoring for intellectual liberty at the bar of Tennessee. They tell us that such descriptions are antiquated and false, and with ill-concealed delight they drag poor Galileo into the limelight again and point to the text from the book of Josue which was his undoing. It does not lie within our scope to repeat and explain aright the more than twice-told tale of Galileo's woes. We shall accept the challenge implied in the mention of his name and illustrate our principle of Biblical interpretation explained above by applying it to the text from the book of Josue.

Our modernist scientist argues as follows: In the book of Josue (x, 13) it is said that "the sun stood still in the midst of the heaven, and hasted not to go down the space of one day." Therefore it is implied that normally the sun revolves about the earth. As this is obviously false, it follows that the book of Josue is teaching a false scientific opinion. The argument sounds plausible enough, and if the author of the book of Josue had been writing a textbook on astronomy it would have been without flaw. But unfortunately for our modernist scientist he is merely describing in a popular way what his eyes saw. If we analyze the description of this event, we shall find, first that there was evidently some Divine intervention; secondly, that this intervention has for its visible effect, the prolongation of the day; thirdly, this prolongation is ascribed to the fact that the sun stood still. For the purposes of our present discussion, we shall ask our modernist to admit the Divine intervention and its visible effect.

We are concerned here only with the explanation assigned for the prolongation of the day, namely the fact that the sun stood still. Now let us suppose that this same Divine intervention should again in this twentieth century prolong the day. How would the ordinary non-scientific observer describe the phenomenon? How would the newspapers describe it? Their explanation would run somewhat as follows: "For some reason or other the sun remained high in the heavens and did not set at the usual time." Is the explanation true or false? False certainly if we consider the scientific truth of the fact in question; but we must remember that the newspaper is not a textbook of science; it merely describes what the eye saw, and it describes correctly. It gives a popular description of the event, a description that uses a terminology based on a false system of astronomy, but which nevertheless describes the event as it appears to the eye. In the same manner we speak of the rising and the setting of the sun, we regard the sky as a blue concave vault which meets the earth at a line we call the horizon. Scientifically of course we are all wrong, but we do not seem to worry about it. We are merely describing the phenomena of nature as we see them, and everyone understands what we mean. The same explanation holds for the text under discussion. When the author of the book of Josue described the prolongation of the day, he described what he saw and in his description he used the only words his audience could understand. It is unfair then to say that the Bible is scientifically false when its authors never intended that it should be scientific at all.

Such is the sound exegetical principle, which solves many of the so called contradictions between statements of the Bible and the facts of science. It is not a *deus ex machina* but a principle that is well founded in the practice of everyone who ever wrote or spoke, and in the fact that words are after all but arbitrary signs of our ideas. It is not, however, the only method of solving these difficulties. The author may be using a metaphor or indulging in hyperbole, and this will be quite evident from the context. Sometimes, too, the condition of the text excludes the possibility of a certain interpretation. And then the prudent exegete, more scientific than his

scientific accusers, will wait patiently for further evidence before reaching a conclusion. The oldest copy of the Hebrew text extant goes back only to the ninth or tenth century of our era; even our oldest Greek text of the New Testament is over two hundred years younger than its prototype. During the interval the texts passed through many hands, and in the laborious work of copying slight errors have crept in that have obscured the meaning of the original.

But no matter what the condition of the text, no matter what the obscurity and the difficulty encountered in interpreting the Holy Scriptures, the Catholic exegete knows with certainty that any contradiction between the Bible and Science is impossible. For the same God Who established the laws of nature is also the Author of every statement in the original text of the Holy Scriptures, and this God is eternal Truth and infinite Wisdom. It is absurd then to hold the Bible up to derision for its scientific inaccuracies and at the same time to speak sentimentally of its value as a religious guide. If it contradicts the findings of Science it is equally worthless in the field of religion, for truth is one. Truth does not wear one dress in church and another in the laboratory.

Mr. Bryan insisted much on the literal meaning of the Word of God. And rightly, provided he was thinking of the meaning intended by the sacred author, writing under the inspiration of the Holy Spirit, but it is all too evident that he was thinking of that literal meaning which he and his Protestant friends found in the Bible. And such a literal meaning has no more authority than he and his Protestant friends could give it. He forgot that the Bible is not essential to Christianity. Christianity was complete and functioned perfectly and spread widely and rapidly long before the last word of the Bible was written. He forgot that Christ did not commission His Apostles to write books but to "teach all things whatsoever I have commanded you." If the Bible has any religious bearing on our lives, if it contains any of the doctrines of Christ, it is only through the living voice of the authoritative teaching body appointed by Christ that these doctrines are to come to man. Not to Mr. Bryan then nor to any

private interpreter of Holy Scripture do we turn for the literal meaning of the sacred text, but to the Church.

To our question then, "The Bible or Science—Which?" we answer, "Both." Each has its own sphere of activity, and one can never contradict the other. If Evolution is a law of nature, then the Book of Genesis cannot possibly make a statement which calls this law in question; but as long as it is merely a theory the prudent scientist would do well to respect the oldest and most trustworthy history of the origin of the human race, and at the same time leave no stone unturned to unearth from scientific sources the true meaning of that history. The student of Scripture for his part will use all the ascertained facts of science to reach a sound interpretation of the Sacred Word.

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Evolution in Catholic Tradition

W. L. HORNSBY, S. J.

IN the current number of the *Catholic Educational Review* (July, 1925) there is a timely and instructive article by Dr. Jordan, on the attitude which Catholics should maintain towards evolution. He very reasonably contends that, granting creation and admitting man's origin, both as to body and soul, the theory of the origin of species by organic evolution is not contrary to Catholic doctrine. Some exception, however, may perhaps be taken to his statement that "St. Augustine, to whose authority Pope Leo appeals in the Encyclical quoted, as well as other learned leaders of thought in the early Church, were favorable to an evolutionary explanation of the organic world." Dorlodot is referred to as authority for the statement. Now, Dorlodot's contention has been examined (*Ecclesiastical Review*, January, 1924; *AMERICA*, October 25, November 1, 1924), and it has been shown that only by confusing spontaneous generation, called by him absolute evolution, with organic evolution, could he attribute any evolutionary theory to certain of the Holy Fathers.

If those who quote Dorlodot's authority would go to the

original texts which he adduces, they could scarcely fail to see how unfounded is the contention of the learned Canon of Louvain. It seems a little unfortunate that Catholic writers should not be able to agree upon the teaching of our own revered authors. The question is a plain one of fact and should not be difficult to settle. Can any passage be adduced from any Catholic Doctor of the past setting forth organic evolution or any similar doctrine? Certainly, Dorlodot, as has been shown, does not do so.

Four quite recent and highly competent authorities, who speak from first hand acquaintance with the original texts, reject the claim that the Holy Fathers cited by Dorlodot taught organic evolution. I mention them in the order of publication. (1) Lynn Thorndike, "History of Magic and Experimental Science During the First Thirteen Centuries of Our Era" (1923). His authority on the subject is largely negative, but not only so, as witness the beautiful quotations from St. Basil on the permanence of species. (2) Rev. Henry Woods, S.J., "St. Augustine and Evolution" (1924), a very scholarly and thorough examination of the question. (3) L. T. More, "The Dogma of Evolution" (1925). This author does not admit that there was any notion of evolution until long after the patristic and even the scholastic period. (4) Dr. G. Barry O'Toole, "The Case Against Evolution" (1925). Dr. O'Toole says, with Dorlodot in mind, that it is "absurdly anachronistic" to attribute any theory of organic evolution to St. Augustine.

Such authorities should make writers wary of attributing evolutionary doctrine to the Fathers unless they have better textual proof than Dorlodot adduced.

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